

Association between patient-provider racial and ethnic
concordance and patient-centered communication in outpatient
mental health clinics

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Abstract

People of color, in the United States, experience worse health outcomes than their white counterparts. This thesis focuses on improving access to quality care. Patient-centered communication (PCC) has been identified in the literature as a provider characteristic central to providing quality care to patients. Some evidence suggests that racial/ethnic patient-provider concordance may be associated with increased PCC because of improved trust and mutual understanding between patient-provider matches. This thesis explores whether there was a difference in PCC between racial/ethnic concordant and discordant groups in a sample of behavioral health providers and their patients. This thesis utilized data from the “Effectiveness of DECIDE in Patient-Provider Communication, Therapeutic Alliance, and Care Coordination study”. PCC was measured with the use of a coding system that examines a provider’s ability to encourage expressive communication. Racial/Ethnic concordance was measured as whether or not patients and providers identified with the same racial or ethnic background. Three separate ANOVA’s were conducted to analyze any relationship that may exist between groups (concordance or discordance) and the three measures of PCC. No significant differences were found between groups in any of the three items measuring aspects of PCC. This study was one of the first to examine racial/ethnic concordance and its impact on PCC in the behavioral health field. While there was no relationship between concordance and PCC, the overlap in the ability of these characteristics to increase perceived similarity and improve trust, remains important to the therapeutic function of behavioral health care. Both characteristics should continue to remain under consideration when it comes to improving quality of care.

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Introduction

Specific Aims and Hypotheses

This senior honors thesis has an overall goal to assess the relationship between racial and ethnic concordance and patient-centered communication (PCC) in a sample of adult patient and behavioral health providers from community and hospital-based outpatient mental health clinics in Massachusetts. This thesis seeks to explore this through three questions related to PCC. Therefore, this thesis has three aims; (1) to assess whether there were differences in providers identifying patient feelings in clinical sessions for racially/ethnically concordant versus racially/ethnically discordant groups of behavioral health patients and providers (2) to assess whether there were differences in providers accepting their patient's feelings in clinical sessions for racially/ethnically concordant versus racially/ethnically discordant groups of behavioral health patients and providers , (3) to assess whether there were differences in providers encouraging emotional expression for racially/ethnically concordant versus racially/ethnically discordant groups of behavioral health patients and providers. This thesis hypothesizes that there will be significant differences in PCC behaviors among racially/ethnically discordant and concordant groups.

Statement of Significance

By 2060, the U.S racial and ethnic minority population is expected to be 56% of the entire population therefore creating a country where Whites are no longer the majority (Colby & Ortman, 2015). With a growing population of people of color (people who are not of White European descent), health inequities in physical and mental health are becoming increasingly important to address (Center for Disease Control and

Prevention, 2013). While the health of people of color has improved over time, racial and ethnic inequities in health persist (Agency for Health Care Research and Quality, 2015). In order to improve health outcomes for people of color, researchers must investigate the different factors and determinants that contribute to these outcomes.

Racial and Ethnic Inequities in Health Outcomes

Disparities in health by social groupings (race, ethnicity, income, gender etc.) are wide spread in the United States across a range of health outcomes (IOM, 2003). When health disparities are avoidable, unjust, and unfair they are referred to as inequities. According to the World Health Organization (2008) inequities often arise from inequalities within society and between societies. There is extensive evidence showing health inequities across racial and ethnic groups.

Data from 2007 shows that Blacks had an overall death rate that was 30% higher than the overall death rate for Whites (Williams, 2012). These differences in death rates can be attributed to differences in outcomes for racial groups within specific disorders and illnesses. For example, Black infants are two times more likely than White infants to die before reaching their first year of life (American Public Health Association, 2007). Furthermore, Blacks experience higher rates of death than Whites from heart disease, cancer, stroke, diabetes, flu and pneumonia, kidney disease, septicemia, hypertension, and homicide (Williams, 2012; U.S. Department of Health and Human Services, 2015). Regarding mental health, Blacks are also 20% more likely to experience serious mental health issues than the general population (National Alliance on Mental Illness, 2017). They also suffer disproportionately from major depression, attention deficit hyperactivity

disorder, suicide, and posttraumatic stress disorder (National Alliance on Mental Illness, 2017).

Similarly, data for Latinos shows that they have higher death rates when suffering from diabetes, liver cirrhosis, hypertension, and homicide (Williams, 2012). Additionally, the Office of Minority Health (2015) reports that Latinos have higher rates of obesity. Latinos also experience symptoms of depression (sadness, hopelessness, and worthlessness) at almost two times the rate as non-Latino Whites (Center for Disease Control and Prevention, 2014). However, it is important to note that health disparities are also prevalent among subgroups of each racial or ethnic category. For example, Puerto Ricans experience higher rates of infant mortality (at similar levels of African Americans) and Mexicans are overly represented in data regarding obesity as they have some of the highest levels amongst Latinos (Center for Disease Control and Prevention, 2014).

Asians also experience inequities in health outcomes. For example, Gomez et al. (2010) found that foreign-born Asian women have lower chances of survival than U.S.-born Asian women. Additionally, South Asians in New York City during 2001-2010 experienced higher rates of tuberculosis than any other foreign-born demographic in the United States at that time (Stennis et al., 2015).

Healthcare Access

If we understand the inequities that exist in health status across racial and ethnic subgroupings, it is important to understand the role of healthcare access, and inequities in access that contribute to differences in health outcomes. Access to health care is defined by the Institute of Medicine (1993) to mean having “the timely use of personal health

services to achieve the best health outcomes.” Good access to healthcare would require gaining entry to the healthcare system (i.e. having insurance to access clinicians), getting access to places in which patients can receive the care they need (i.e. having a hospital or doctor nearby), and being able to find a provider who provides the quality care and with whom a patient can communicate with and trust (Agency for Healthcare Research and Quality, 2011).

When there is good access to health care as outlined above by the Agency for Healthcare Research and Quality (2011), we can see benefits in health outcomes. For example, Kasper, Giovannini, and Hoffman (2000) found that privately insured people were more likely to rate their health status as good compared to those who were uninsured. Additionally, the elderly with diabetes that do not have government funded Medicare were more likely to actually purchase their medication given that much of the cost was covered by their private insurance (Piette, Wagner, Potter, & Schillinger, 2004). We can further see benefits in entry to the healthcare system through the means of insurance when we explore the topic of breast cancer. Survival is better for those with private insurance than the uninsured and those with Medicaid coverage (Ayanian, Kohley, Abe, & Epstein, 1993). Through this data we can see how health insurance, the key to entry into the United States healthcare system, can really affect health outcomes.

However, access to health care as defined previously includes more than gaining entry to the healthcare system. It also includes obtaining access to a nearby doctor or a hospital. Patients who do not have access to a hospital or doctor experience poorer health outcomes. For example, in the Appalachian Region, specifically the more rural cities, people struggle with gaining access to health care because there is a shortage of providers

in the region and most doctors or hospitals are miles away in other cities and often other states (Behringer & Friedell, 2006). This along with factors like low socioeconomic status has led the health in this region to decrease significantly (Halverson, Ma, & Harner, 2004). For example, there is a high prevalence of various forms of cancer, including breast cancer, lung cancer, and colorectal cancer in the region and because of the lack of access to doctors and/or specialists in the regions the mortality rates from these cancers are much higher than the general non-Appalachian U.S. population (Behringer & Friedell, 2006; Halverson, Ma, & Harner, 2004).

Inequities in Access

As per the criteria specified by the Agency of Healthcare Research and Quality (2011) regarding access to health care, people of color seem to be faring worse with regards to access to quality care. When looking into entry into the health care system through health insurance, one can see differences that exist between racial and ethnic identities. Overall, non-elderly people of color are more likely to be uninsured than their White counterparts (Kaiser Family Foundation, 2013). Before the Patient Protection and Affordable Care Act (ACA) (2010), the non-elderly Hispanic/Latinos had the highest percentage of uninsured people (32%), American Indians were the group with the second highest percentage of uninsured people at 27%, and Black people come in third (21%) (Kaiser Family Foundation, 2013). This is compared to the White population that had only 13% of the population uninsured.

As of 2015, two years into the implementation of the ACA, the Kaiser Family Foundation updated their data and found that the uninsurance rates of people of color decreased (Hispanic/Latinos went down to 17% and Blacks to 12%). While the United

States is seeing improvement there is still a huge difference between uninsurance in White populations (8%) and populations of color. It is also important to note that while the ACA (2010) mitigated some of the issues regarding insurance as a way of entry into the healthcare system, the current political climate under President Trump has made the future of affordable and mandated insurance unclear (Trump, 2017).

Some reasons for uninsurance rates amongst people of color have been related to the fact that people of color often have lower incomes and lack of access to employer-sponsored insurance (Kaiser Family Foundation, 2013). As mentioned previously, a lack of entry into the healthcare system leaves individuals to face illness and disease alone. This can escalate seemingly harmless symptoms into life threatening diseases. However, even when individuals do gain entry into the system, they do not often have hospitals or doctors close to them that are available to care for them (Williams & Collins, 2001; Kirby & Kaneda, 2005; Health and Human Services, 2010).

Inequities in health care access are also seen in the availability of clinicians in areas that are densely populated by people of color (i.e. post-industrial cities like Detroit and Chicago which used to thrive off of the automotive industry and are now economically struggling). In fact, health care facilities are more likely to close in poor and people of color communities than other areas; there are also fewer physician offices, and minimal transportation methods in these cities (Williams & Collins, 2001). Even pharmacies in these communities lack the appropriate medication to deal with people who are in severe pain (Williams & Collins, 2001). These differences also extend outside of the confines of the communities. People of color are also overrepresented among the 56 million people in the United States who do not have access to a primary care clinician.

Additionally, racial and ethnic minority children are more likely to lack access to a usual source of care compared to White children (Health and Human Services, 2010).

The reasons for the lack of access to providers and healthcare facilities are complex but one of the main issues connected to this scarcity in care is socioeconomic disadvantage or poverty levels (Kirby & Kaneda, 2005). Socioeconomic disadvantage manifests itself in the residential segregation that exists for people of color. In fact, neighborhoods where most people of color reside usually have an average income much lower than that of White neighborhoods (Squires & Kubrin, 2006). With a lower average income, there are fewer resources to create hospitals and provide clinicians with economic incentives to create offices in those areas. When hospitals and clinicians do find a way to integrate into a neighborhood, access issues also arise particularly because of the quality of care and patient-provider communication.

As mentioned, even if people of color find care in a medical setting in their neighborhoods they are still less likely to receive appropriate care (Williams & Collins, 2001). For example, when Black patients come into the emergency room with fractures, back pain, or abdominal pain they are half as likely than White patients to receive a prescription for opioid painkillers (Singhai, Tien, & Hsia, 2016). This means that even when a prescription painkiller would be best practice, Blacks are less likely to receive it. Additionally, Black patients (even more so Black women) are less likely to receive recommendations for Cardiac Catheterization than White patients even when the patient history is comparable and it would be the right course of treatment (Schulman et al., 1999).

People of color have double the rates of preventable hospitalizations as their White counterparts (Health and Human Services, 2010). Black people have higher rates of hospitalization from influenza than White people (Health and Human Services, 2010). And Black children are two times more likely to be hospitalized for asthma and four times more likely to die from asthma than White children (Health and Human Services, 2010). Native American and Alaska Natives who access care through the Indian Health Service, which is the primary source of care in reservations, have a worse health profile than their counterparts that receive healthcare elsewhere (Williams, 2012).

People of color are also more likely to experience lower quality of patient-provider interactions than a White counterpart (Health and Human Services, 2010). In fact, people of color often rate their visits with providers as less participatory than White patients (Cooper & Roter, 2002). When looking at Black patients in particular, they are also more likely to report less involvement in decisions regarding their health and lower levels of satisfaction with care when treated by a non-Black provider (Cooper & Roter, 2002). Given the lack of people of color in health care, Black patients are exposed to this lower quality care often.

As mentioned, people of color are overrepresented in high-poverty communities, and it's important to understand that students who have attended school located in high-poverty communities, are less likely to enroll in college and if they do, they are more likely to drop out after one year (National Student Clearinghouse Research Center, 2015). Therefore, with fewer people of color in college, there are consequently fewer people of color in health careers. Much of this can be attributed to institutionalized racism that creates a systematic hierarchy putting White people in positions of power over people of

color (Randall, 2002). Institutionalized racism can manifest itself in issues like racial biases in testing for higher education as well as discrimination in post-secondary education (Randall, 2002). These both have also contributed to lower numbers of people of color in health care professions (Randall, 2002). The report published by the Sullivan Commission (2004) indicates that there is huge need for people of color in health care. In fact while Blacks, Latinos, and Native Americans make up 25% of the population, they only account for less than 9 percent of nurses, 6 percent of physicians, and only 5 percent of dentists (Sullivan Commission, 2004). This gap in representation in health careers suggests that it's harder to match physicians and clinicians of the same racial or ethnic background, which has shown to be effective for some people of color (Cooper & Roter, 2002). While institutionalized racism accounts for a lot of the core issues, research has begun to make the connection between institutionalized and structural racism with chronic stress. By experiencing this chronic stress, people of color are experiencing worse health outcomes. (Anderson et al., 2012; Blank et al., 2004).

When aggregating across all people of color, studies have also shown that overall; people of color get sicker at younger ages and also die sooner than their White counterparts in the United States (LaVeist, Bowie, Cooley-Quille, 2000). The overarching message of this data is that people of color struggle to find access to quality care and therefore experience worse health outcomes than their White counterparts. Access to quality health care is hindered by institutional and structural racism which affects how society treats (i.e. residential segregation and lack of poverty) and views people of color in the health care setting (i.e. differences in access to pain medication or adequate treatment). While institutional and structural racism seem to play a huge part in

access to care and therefore outcomes, it is important to acknowledge that there are other determinants of health like biology and genetics, as well as individual behaviors can contribute and interact to create differences in health outcomes (Office of Disease Prevention and Health Promotion, 2017).

Improving Access and Quality

With all the racial and ethnic disparities that exist, there has been a plethora of research conducted to assess ways to improve quality of care for people of color. Because of the correlation between structural and institutional racism and adverse health outcomes as mentioned previously, it may seem that dismantling both structural and institutional racism is a very important step to take to improve health for people of color. However, given that institutional and structural racism has existed since the U.S. declared its independence, it may be easier to start by taking smaller yet effective steps to improve health care for people of color. One area that merits further investigation is patient-centeredness.

Patient Centeredness

Multiple researchers have attempted to create a definition for patient-centeredness (Berwick, 2009; Gerteis, Edgman-Levitan, Daley, & Delbanco, 1993; Lauver et al., 2002; Mead & Bower, 2000). Castro, Regenmortel, Vanhaecht, Sermeus, & Van Hecke (2016) also analyzed the term patient-centeredness and created a well-rounded definition after thoroughly reviewing the literature on patient-centeredness and related concepts that exist. Castro et al. (2016) defined patient-centeredness as an approach to deliver care that is respectful, individualized, participatory, and empowering. The authors also suggested that patient-centeredness also implies participation of the patient which is based on

mutual trust, sensitivity, empathy, communication, and shared knowledge (Castro et al, 2016).

In 2001, the Institute of Medicine (IOM) indicated patient-centered care as one of six ways to improve health care. The IOM (2001) provided their own definition, which suggests that patient-centered care is providing care that is “respectful of and responsive to individual patient preferences, needs, and values, and ensuring that patient values guide all clinical decisions”. The IOM (2001) believes that providing more patient-centered care will produce outcomes that indicate more safe, effective, efficient, personalized, timely, and equitable care for patients. According to a review of 40 articles conducted by Rathert, Wyrwich & Boren (2012), almost all studies suggested that a relationship existed between patient-centered care and patient satisfaction. This relationship is important because some studies have suggested that there is a relationship between patient satisfaction and better adherence to treatment (Kahn et al., 2007).

Other studies have found a more direct association between patient-centered care and physical/clinical outcomes (Bechel, Meyers, & Smith, 2000; Fremont et al., 2001; Meterko et al., 2010). Bechel, Meyers, and Smith (2000) study used the Picker Questionnaire to collect data from patients three months after being discharged from about 52 hospitals units in Michigan. The Picker Questionnaire measured whether key patient-centered behaviors occurred and also asked about the patients’ health outcomes. Bechel, Meyers, and Smith (2000) found that the hospital units with higher levels of patient-centered behaviors had significantly better health outcomes (less unexpected mortality or complications). Fremont et al. (2001) specifically studied how patient-centeredness would affect long-term outcomes of myocardial infarction. Patient-centered

care here was measured through self-report surveys about behaviors of care. They found that with better patient-centered care, patients who had suffered a myocardial infarction were less likely to re-experience chest pain and were more likely to have higher rating of overall health. Meterko et al. (2010) study a similar population of patients who had suffered a myocardial infarction and found that with better patient-centered care patients had a significantly lower probability of death 1 year after being discharged.

Despite the availability of evidence on the importance of patient-centered care, data regarding patient-centered care specifically in the context of mental health visits are scarce. However, because of the almost unanimous agreement of the effects of patient-centered care on patient satisfaction we can logically attribute this benefit to all types of care, including mental health. It's also important to note that patient-centered care as defined previously focuses on mutual respect and shared knowledge.

When all these characteristics are combined, patient-centered care can also be related to the therapeutic alliance, which is defined simply as collaboration between patient and therapist (Greenon, 1965). In fact, empathy is used as a component in both patient-centered care and therapeutic alliance (Castro et al., 2016; Rogers, 1951). This suggests that may be a relationship between patient-centered care and therapeutic alliance. In fact, a systematic review of the existing literature found that patient-centered care was associated with a positive therapeutic alliance (Pinto et al., 2012). This relationship means that if mental health providers begin to focus more on patient-centered care, the therapeutic alliance will strengthen and even vice-versa. Therapeutic alliance has been found to be positively associated with better treatment outcomes (Hovath, Del Re, Flukiger, & Symonds, 2011). Therefore, patient-centered care will benefit mental

health patients and providers by improving therapeutic alliance and therefore mental health outcomes.

Patient-Centered Communication (PCC)

The evidence stated above suggests that patient-centered care is important to improve health care quality and therefore health outcomes. This thesis will focus on one aspect of patient-centered care, which is patient-centered communication (PCC). Epstein et al. (2005) operationalizes PCC as including the following: (1) understanding the patient's perspective which includes their feelings, concerns, and needs, (2) understanding the patient within their own psychosocial context, (3) working together to understand the patient's problems and what treatment would work best according to patient's values, (4) sharing power and responsibility with the patient. This thesis will be using this definition when discussing PCC throughout the rest of the paper.

The Agency for Healthcare Research and Quality (2011) suggested that to improve access to quality healthcare people should be able to find a provider whom they can communicate with clearly and trust and who can also provide quality care. Just as patient-centered care has been linked to improvements in outcome and health care quality, PCC shows similar outcomes. Multiple studies have been conducted to address the relationship between patient-provider communication, patient trust, and health outcomes (Hall, Roter, & Rand, 1981; Stewart, 1995; Beck, Daughtridge, & Sloane, 2002; Swenson et al., 2004; Street, Makoul, Arora, & Epstein, 2008). The consensus in the research world and the clinical world seems to be that the better the quality of the patient-provider communication the more there is trust (as measured with the therapeutic alliance), patient empowerment, increased patient knowledge, and adherence to treatment

(Street et al., 2008). Street suggests that trust, patient empowerment, patient knowledge, and adherence to treatment are intermediate outcomes that lead to better health outcomes and general wellbeing (Street et al., 2008).

Other studies have found more direct relationships between PCC and health outcomes (Stewart, 1995; Beck, Daughtridge, & Sloane, 2002). Stewart (1995) reviewed 21 studies and found that 16 studies all reported positive health outcomes related to greater PCC (i.e. less headaches, lower pain levels, and improved hemoglobin status). Another study, Jiang (2017) found that there was a positive relationship between patient emotional wellbeing and PCC. With results like this it seems that may be merit to promoting PCC in the context of a clinical visit.

Given the benefits of PCC on patient satisfaction and health outcomes it is evident that one way to improve health care quality may be to maximize PCC among health and mental health care providers. As we know from previously mentioned data, people of color usually rate their care as less participatory than their White counterparts. They also seem to have lower levels of satisfaction. PCC improvements could benefit people of color at a deeper level than it can for their White counterparts who already experience higher levels of participatory care and higher levels of satisfaction.

There are concrete ways to improve PCC between patient and providers. Some ways include trainings for providers surrounding PCC and even increasing the number of people of color. In fact, the Institute of Medicine (2003) suggested that in order to improve health care quality for people of color, the health care field has to increase the number of people of color in the field. This suggestion was made because of a possible connection between racial and ethnic concordance and PCC.

Racial and Ethnic Concordance and PCC

Race and ethnic concordance in the health care field means that the patient and clinician are of the same racial and/or ethnic background. It is thought that when a patient and clinician are of the same background, patient- provider communication is improved as they are thought to have a mutual understanding of the issues affecting their community (Earl et al., 2013).

According to Street et al. (2008), the mechanisms through which racial and ethnic concordance works is through the fact that the patients perceive ethnic similarity and therefore personal similarity. This similarity in turn allows clinicians to be able to understand more of what the patient may be experiencing in the world and what could be contributing to the health outcomes that brought them into their office. The theory behind race/ethnic concordance is that health disparities can be improved because it provides mutual respect, trust, communication, and satisfaction (Meghani et al., 2009).

In addition, if we are talking more specifically about matching people of color with a person from their racial and ethnic background, there may be additional benefits. For example, racial and ethnic minorities in health care help improve quality of care for those of diverse backgrounds as they are more involved with communities of color and are more culturally sensitive (Berger et al., 2014).

The research that explores the effect of racial and ethnic concordance and patient-provider communication is very limited and inconclusive. One reason may be because of the lack of people of color in health fields, which makes finding racial and ethnically concordant patients and providers more difficult (Sullivan Commission, 2004; WBUR, 2012; Garces & Mickey-Pabello, 2015). However, research regarding the relationship

between patient-centered communication and racial and ethnic concordance is important. This is because race and ethnicity are often indicated as important cultural barriers to providing quality patient and provider communication given that there may be differences in language and even preferred methods of care (Cooper-Patrick et al., 1999). If patients and providers were of the same race or ethnicity it can be hypothesized that the cultural barriers to communication could be reduced.

Some studies have concluded that racial/ethnic concordance improves patient-provider communication and consequently health outcomes. Such studies include those like Earl et al. (2013), which concluded that cultural similarity leads to improved trust and medication adherence, as measured through the validated instrument called the Stanford Trust in Physician scale, between patients and providers in a group of Black patients with HIV/AIDS.

In addition, in their study exploring racial and ethnic and language concordance on adherence to cardiovascular disease medication, Traylor et al. (2010) found that race concordance had an effect on Black patients and improved their adherence to all their cardiovascular disease medication because of increase trust. Furthermore, another study also suggested that race concordant visits for Black patients led to longer time in visits with the clinician and more positive affect, meaning patients were happier after the visit (Cooper et al., 2003). Consequently, these studies suggest that race concordant patient-provider interactions will lead to overall improved perception of quality of care on the patient and may even lead to improved adherence to clinical suggestions more specifically for Black patients.

However, other studies have more specifically found that race concordance is not an important indicator of improved patient-provider communication or health outcomes. For example, Scheid & Smith (2016) found that racial concordance did not lead to improved trust between patient and clinician in a study examining low-income women enrolled in Medicaid. However, Scheid & Smith (2016) did not specifically look at patient-provider communication.

Two additional studies also found that there was no relationship between racial and improved patient-provider communication (Adams et al., 2005; Schoenthaler et al., 2012). Adams et al. (2015) explored racial concordance among individual who had a history of depression. This study found that racial concordance was not associated with more comfort in disclosing a history of depression but instead found that PCC was the determining factor of comfort levels in discussing diagnoses. Schoenthaler et al. (2012) found that racial concordance between patient and providers was not associated with either medication adherence or improved communication.

While these two studies focused specifically on the two variables of race concordance and patient-provider communication, the Adams et al. (2015) study used a population based in the United Kingdom which does not have the same population or health care system as the United States and it would be important to explore these conditions in the United States. In addition, Schoenthaler et al. (2012) used patients that received care for hypertension but did not address how race concordance may affect patient-provider communication in a behavioral health care setting. Given the amount of trust needed to express behavioral health issues to providers especially in communities of color that express a lot of stigma around mental health care, it's important to assess

whether this data will look different in a behavioral health population. However, at the moment there are no studies to our knowledge that look at racial and ethnic concordance and PCC in the behavioral health context, the main interest of this study.

Gaps

The inconclusiveness of the literature about race/ethnic concordance on patient outcomes (i.e., patient satisfaction, adherence, and patient-provider communication), suggests the need for further exploration of the race/ethnic concordance and patient-centeredness. One of the gaps that exist includes that there are few studies exploring PCC and racial and ethnic concordance in behavioral health care. This proves to be crucial not only for this thesis but also because PCC and the therapeutic alliance are very important for improved health outcomes in mental health care.

Additionally, many of the studies previously mentioned only focused on one or two clinics/hospitals (Earl et al., 2013; Traylor et al., 2010; Cooper et al., 2013; Scheid & Smith, 2016). Only looking at PCC in one or two clinics does not provide a lot of information that can really be generalizable. It may be important to look at more clinics/hospitals because PCC and benefits to it may change between locations.

This thesis hopes to bridge some of the gaps that exist in the research. It will focus exclusively on a sample of patients seeing behavioral health providers from different community based clinics and hospitals. Additionally, it will explore both racial and ethnic concordance and their effect on PCC.

Methods

Study Design

This study conducts a secondary analysis of baseline data gathered from patients and providers participating in “Effectiveness of DECIDE in Patient-Provider Communication, Therapeutic Alliance, and Care Coordination” a Patient-Centered Outcomes Research Institute (P-CORI) funded project (grant # CD-12-11-4187) at the Disparities Research Unit (DRU) at the Massachusetts General Hospital. The Tufts IRB designated the secondary analysis as exempt on August 5th, 2016. The IRB Study number is 1608014. The exemption letter can be found in Appendix C.

Data Source

The data for this study was originally gathered to tests the effectiveness of both a patient (DECIDE-PA) and a behavioral health provider intervention (DECIDE-PC) (Alegria, M., in press). The patient intervention is focused on improving patient activation as well as encouraging self-management in behavioral health. The behavioral health provider intervention is focused on improving providers’ receptivity to patient activation as well as improving shared decision making between patient and behavioral health providers (Alegria, M., in press).

The study consists of patients and providers from community and hospital-based outpatient behavioral/mental health clinics in Massachusetts, which serve a lot of low-income minority patients. Initially, 79 behavioral health providers were recruited into the study. After recruitment, providers completed a baseline assessment that consisted of a thirty-minute structured interview in-person or on the phone and a thirty-minute online test called the Geneva Emotion Recognition Test (GERT) (Alegria, M., in press). The interview collected demographic information as well as baseline knowledge of various

aspects of patient activation and shared decision-making. All providers were also asked to participate in a baseline clinical session with 1-2 patients who would be ineligible for the randomized control trial. The purpose of the baseline clinical session was to create a baseline level of PCC so providers can keep themselves accountable and for the researchers to track their improvement (Alegría, M., in press). Providers were then randomized into either the intervention group or the control group. If a provider was in the intervention group they received the DECIDE-PC intervention during a 12-hour workshop, which provided training about encouraging shared decision-making, behaviors to increase patient activation, as well as providing patient-centered care (Alegría, M., in press). The workshop also required the behavioral health providers to provide feedback after receiving the training on their own baseline clinical session. The control group continued to provide care as usual and completed all three assessments as well as the clinical recordings that the intervention group complete (Alegría, M., in press).

After recruitment of the behavioral health providers, about 8 patients were selected from each provider by accessing each provider's calendar and recruiting the patient before or after a session with their provider. After eligibility was assessed (see below) through an interview screener and consenting occurred, all patients in the study completed a 1-hour baseline assessment in person which gathered demographic information and information about the relationship between the patient and provider (Alegría, M., in press). After completing the baseline assessment, patients were randomized into the intervention group or the control group. Therefore, patients who were in the intervention group saw either a behavioral health provider receiving the intervention or a provider in the control group or the patient was in the control group and

saw a behavioral health provider receiving the intervention or a provider in the control group. Figure 1 displays a flow chart of participant (patient and behavioral health provider) recruitment.

If randomized into the intervention group, patients had to participate in a DECIDE-PA training that was up to three hours long. If randomized in the control group, they continued to attend sessions with their behavioral health provider and act as they normally would (Alegria, M., in press). Control groups patients also completed all three assessments and participated in a clinical session recording if comfortable. One month after baseline, a clinical session was again recorded for both the intervention and the control group.

After each clinical session was recorded, providers in the intervention group received feedback from their intervention coach on the content of the clinical session so as to provide feedback for improvement in patient activation and shared decision making which helps reinforce the content of the original 12-hour workshop they received as the intervention. Then two-months after baseline all patients (intervention and control) and providers (intervention and control) completed a final interview.

While the original study examines the effects of the both the patient and behavioral health provider intervention, this thesis will utilize only the baseline data from behavioral health providers and non-randomized patients.

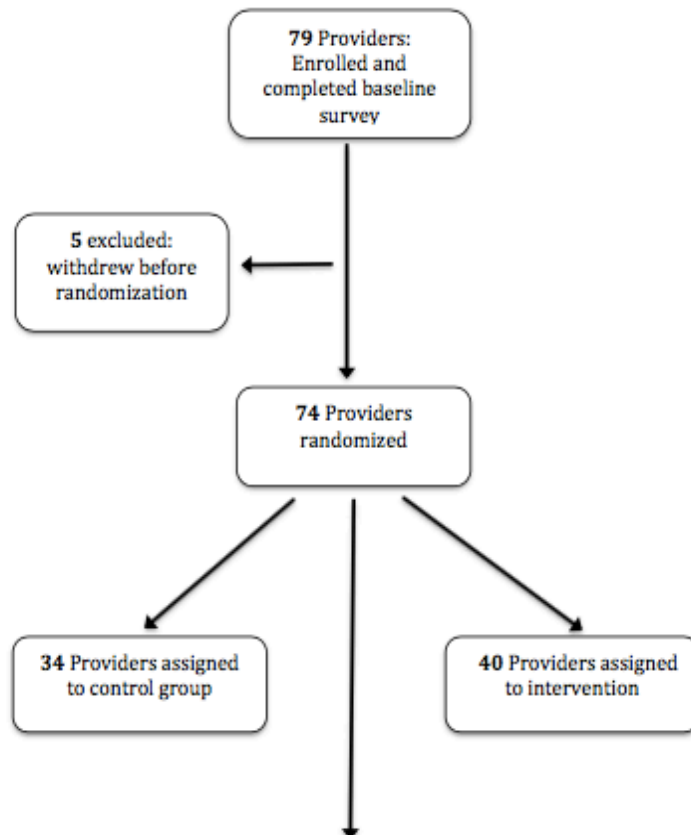
Participants

Initially, the study team approached about 79 behavioral health providers to participate in the study. Providers needed to be practicing in the behavioral health field as a social worker, psychologist, psychiatrist etc. Their caseloads had to be a minimum of 4-

6 patients. All 79 behavioral health providers gave written consent to participate but five withdrew from the study after randomization but before receiving an intervention

The patients were between the ages of 18 and 80 and were enrolled in outpatient behavioral care treatment. Patients spoke English, Spanish, or Mandarin. Patients were excluded from the study if they screened positive for mania, psychosis, or present suicidal ideation because of the more strict nature of their treatment. Additionally, patients over the age of 65 were given a cognitive function screen to test for cognitive impairment, if impairment was found they were excluded from the study. Given the exclusionary criteria, 312 patients were enrolled in the study.

Figure 1. Flow of Original Study Participants Through Recruitment and Randomization



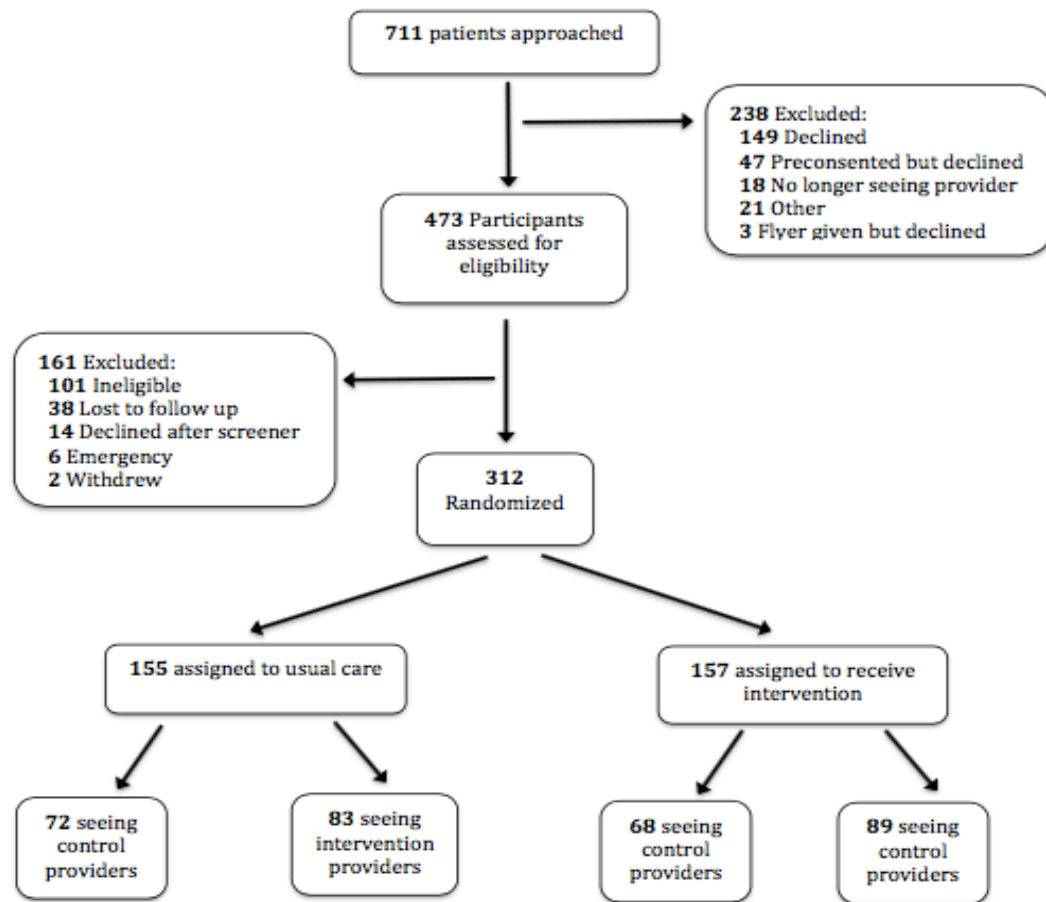
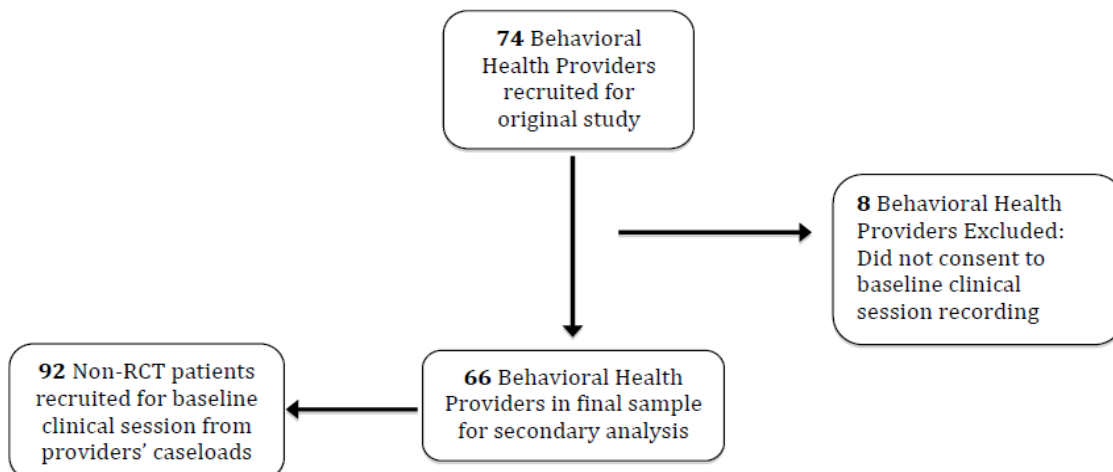


Figure 2. Flow of Patient and Provider Participants in the sample used for the PCBH



The coding system and instrument Provider Communication in Behavioral Health (PCBH), which will be described further shortly, was applied to over 300 patient-provider clinical sessions. This thesis analyzes the data from the coding system that was collected from 95 patients not included in the randomized control trial who were used as a baseline measure for providers. Three of those patients did not have their clinical sessions coded, leaving a final analytic sample of 92 patients for this thesis. All of the patients' data is attached to a behavioral provider as these providers had baseline clinical sessions recorded for their own education purposes. The final analytic sample for this thesis consisted of 66 providers who had participated in the audio recording at baseline (before any intervention was administered). Some providers were matched with more than one patient. Approximately 51 patient and provider matches were in the racial/ethnic concordant group and 41 patient and provider matches were in the discordant group. For demographic information on the patient and provider sample used in this thesis, refer to Table 1 in the results section.

Measures

Our main dependent variables consisted of three questions that measure aspects of PCC as a proxy for PCC as a whole. These aspects of PCC were measured by observers who rated interactions between patients and providers at a baseline clinical visit, and coded these interactions using a 20 item coding system developed for the P-CORI funded study by Dr. Margarita Alegria. The coding system was scored using the 5-5-5 method (described below). The final 20 item coding system created with the 5-5-5 methods produced an instrument called Provider Communication in Behavioral Health (PCBH). The coding system was developed in an attempt to measure quality in the behavioral

health care system and patient-centeredness by providers. When considering the items to include in the PCBH, Dr. Alegria's team consulted experts in clinical psychology, psychiatry, and social psychology who were involved with the study team. Additionally, Dr. Alegria and the study team used the themes described by Mead and Bower (2000) for patient-centeredness to create and shape the items included in the PCBH. These themes included biopsychosocial perspective, patient-as-person, provider-as-person, sharing power and responsibility, and therapeutic alliance (Mead & Bower, 2000).

After collecting data for the PCBH, the study team conducted a factor analysis and found three factors to which most of the data loaded onto. These three factors were then labeled based on factor loadings. These factors are: 1) Established interactive partnership (EIP) which contains 6 items (i.e. "use inclusive language, includes in decisions, includes in treatment discussion"); 2) Creates atmosphere of acceptance which holds 11 items (i.e. "greet warmly, open atmosphere, communicates clearly, unhurried"); 3) Encourages expressive communication (EEC) which holds 3 items ("identifies feelings, accepts feelings, encourages emotional expression"). The specifics of the factor analysis are further discussed in the paper written by Johnson, Hall, and Alegria (In press).

In order to score the PCBH, trained coders would listen to patient-provider interactions via audiotape and code for each statement/behavior using the 5-5-5 method. The 5-5-5 method consists of coders separately coding three five-minute excerpts of a full tape of the patient provider session (Johnson, Hall, & Alegria, in press). The first excerpt consists of the first five minutes at the immediate start of the tape. The second excerpt consists of five minutes occurring at the middle of the session. The final and third

excerpt consists of the last five minutes of the tape. This 5-5-5 method was used to be more efficient than coding full tapes and because of prior evidence that indicates that using slices of the tape can capture the behavioral pattern of healthcare visits effectively (Ambady & Rosenthal, 1992; Hagiwara, Dovidio, Eggly, & Penner, 2016). Coders were all trained to code interviews and had practice and supervision before beginning to code by using audio recordings from an earlier audio study (Alegria et al., 2008)

Scoring for the PCBH depended on the type of question. Seven out of the 20 items (e.g. “identifies feelings” and “accepts feelings”) were scored on a numeric scale (0-5), with a score of 0 indicating that the behavior did not occur, whereas the score 1-5 indicated that the behaviors were more prominent. Another six items were thought to always occur because they were global impression items (e.g. “warm”, “relaxed”, and “unhurried”), rather than behavior items, and therefore scoring was modified to run on a scale of 1-5. Five other items (e.g. “encourages emotional expression”) were scored 0-5 but for 0 indicated a better score than a low score. Two other items (e.g. “Uses inclusive language” and “Partnership”) was coded in a binary method, 0 or 1, which indicated that behavior was either present (1) or was not present (0).

This thesis examines one of the factors that were derived during the factor analysis in the creation of the PCBH. The factor this thesis will focus on is EEC (Encourages expressive communication). The EEC factor includes the following three items: identifies feelings, accepts feelings, and encourages emotional expression. Within the same factor, scoring for one question was different than the other two. The item “encourages emotional expression” was scored using 0-5 but 0 was actually a better score than 1 so the data was recoded to have 0 become a 2 actually making it fall on a 1-5

scale. This is different from the other two items, “identifies feelings” and “accepts feelings” which remained on a 0-5 scale, where 0 meant the behavior did not occur and 5 meant the provider engaged in the behavior in an extremely desirable way. This factor was studied specifically because it captures the operational definition of PCC proposed by Epstein et al. (2005) which suggests that PCC includes understanding a patient’s feelings and needs.

While as a factor, the three questions look at overall communication quality, instead of analyzing the questions together as a factor, each question was compared separately between concordant and discordant groups. This was done to further examine how each behavior was rated individually. Examining behaviors individually allows us to understand the association between racial and ethnic patient-provider concordance and PCC.

Racial and ethnic concordance information was assessed via the screener interview provided to all interested participants of the original study and from the baseline survey for the providers. The racial and ethnic background questions were asked as follows:

Providers:

1. Are you of Latino or Hispanic descent, that is, Mexican, Mexican American, Chicano, Puerto Rican, Cuban, or Spanish?
2. Please circle which group best describes your race (circle all that apply)?

Patients:

1. Are you of Latino or Hispanic descent, that is, Puerto Rican, Dominican, Cuban, Mexican, Mexican American, Chicano, Central American, South American, or from any other Latino culture or ethnic origin?
2. Which do you feel best describes your race?

Patients and providers were asked to answer these questions by choosing from a set of choices provided to them (Appendix A and B). During the process of cleaning the data races were collapsed into four categories:

1. Non-Latino White
2. Latino
3. Non-Latino Black
4. Asian

Aggregating the data into these four racial/ethnic categories was primarily done because of issues with the original sample size. For example, there may have been a few Latinos from the Caribbean and some from South America but the numbers were too small in these more specific categories to then use for data analysis and comparison. These four racial/ethnic categories were chosen because of their general nature. They encompassed most of the options that were provided for the patients and the providers and placed them into more general and easily analyzed categories. The thesis author was not provided with the granular data that indicated which races were placed into which categories.

Through the information placed into these 5 general categories, a variable was constructed that states whether a patient or provider were a racial/ethnic match. This was done by comparing the race/ethnicity of both the patient and provider (Non-Latino White,

Latino, Non-Latino Black, Asian, Mixed race/other) and concluding whether or not each pair was (1) Racially/Ethnically concordant (a racial/ethnic match) or (2) Racially/ethnically discordant (not a racial/ethnic match).

Data Analysis

In order to conduct the secondary analyses on the data collected from the “Effectiveness of DECIDE in Patient-Provider Communication, Therapeutic Alliance, and Care Coordination” the data was first cleaned. Cleaning the data consisted of reducing all of the racial/ethnic categories into the 4 categories used for analysis (Non-Latino White, Latino, Non-Latino Black, and Asian). Granular data regarding racial/ethnic identity was not provided because of the small dataset and the risk of identifying patients.

Additionally, while data was kept as is for the first two items used from the PCBH, the third item “encourages emotional expression” needed to be recoded. The third item was cleaned and recoded because, as mentioned previously, when scored on a scale from 0-5, 0 indicated a more positive behavior than did a lower score on this item. Because of this, 0 was recoded as a 2 and this allowed for the final range of scores to go from 1-5. The analysis team at the Disparities Research Unit cleaned the majority of the data. Once the data was received for the thesis, additional data cleaning was required. Patient and provider matches (N = 2) with missing coding scores were removed from the data set since coding scores were the dependent variable of interest. Other missing data like age and educational attainment were left alone, as they were not critical to the study question.

After cleaning the data, descriptive statistics were generated first. These descriptive statistics included mean and standard deviation for continuous variables such as patient and behavioral health providers' age. It also included frequencies for categorical variables such as race, educational attainment for patients, behavioral health provider specialty and gender. Additionally, frequency information about which group (racial/ethnic concordant or discordant) will be collected. Boxplots were also generated to visualize the data.

The next step, after the collection of descriptive statistics is to conduct analyses to test for any relationships that may exist between our independent variable (racial/ethnic concordance or discordance) and our dependent variables (three items from the PCBH). The three items correspond to the three aims listed in the beginning of this thesis and again listed below:

Aim 1: To assess the relationship between racial/ethnic concordance and providers identifying their patients' feelings in clinical session

Aim 2: To assess the relationship between racial/ethnic concordance and providers accepting their patients' feelings in clinical sessions

Aim 3: To assess the relationship between providers encouraging emotional expression in their patients

All of the three aims will be analyzed separately using three separate one-way ANOVA's. One-way ANOVA's were used instead of a t-test because of the robust nature of the ANOVA to withstand violations of to some of its assumptions like homogeneity of variance. While the use of multiple ANOVA's on the same data can increase the likelihood of error, throughout the analysis this increased likelihood will be accounted for

by setting the alpha for significance testing to .01. The .01 alpha means the analysis will take a more conservative approach and will help avoid any false positives. Additionally, because of outliers, both a log transformation will be attempted and if results remain similar, it will be untransformed and a nonparametric test robust to outliers will be used to make sure results from the ANOVA are correct. This nonparametric test is the Independent Samples Mann-Whitney U Test. All analyses for this senior honors thesis will be conducted using SPSS Version 24 (IBM Corp, 2016).

Results

Descriptive Statistics

All descriptive statistics, namely the demographic characteristics of the patient and provider sample are reported in Table 1. Most patients in this sample identified as Latino (40.2%) while most behavioral health providers identified as Non-Latino White (59.1%) in this sample. Furthermore, both patients and behavioral health providers were predominantly female. Additionally, information was gathered on patient's education attainment, which indicated that most of the patients reached a level higher than 12th grade (53.3%). When looking at the behavioral health providers in the sample, most behavioral health providers were social workers (33.33%).

Table 1. Demographic Characteristics of Patients (N = 92) and Behavioral Health Provider (N = 66)			
		Patients N (%)	Providers N (%)
Gender			
	Female	56 (60.1%)	52 (78.8%)
	Male	36 (39.1%)	14 (21.2%)
	Missing	0	0
Race			
	Non-Latino White	35 (38.0%)	39 (59.1%)
	Latino	37 (40.2%)	13 (19.7%)
	Non-Latino Black	11 (12.0%)	3 (4.5%)
	Asian	9 (9.8%)	11 (16.7%)
	Missing	0	0
Patient Education			
	<6th grade	6 (6.5%)	-
	7th - 11th grade	20 (21.7%)	-
	12th grade	16 (17.4%)	-
	>12th grade	49 (53.3%)	-
	Missing	1	-
Behavioral Health Provider Specialty			
	Psychiatrist	-	17 (25.75%)
	Psychologist	-	14 (21.21%)
	Social Worker	-	22 (33.33%)
	Other	-	13 (19.70%)
	Missing	-	0
		Mean (SD)	Mean (SD)
Age		42.38 (14.06)	40.12(12.75)
	Missing	0	1

Table 2 reports the total number of patients and behavioral health provider matches in each group. There were 51 patient and behavioral health provider matches that were labeled concordant (i.e. patient and provider were of same race or ethnicity) based on reported racial/ethnic backgrounds and 41 matches that were labeled discordant (i.e. patient and provider were of different races or ethnicities).

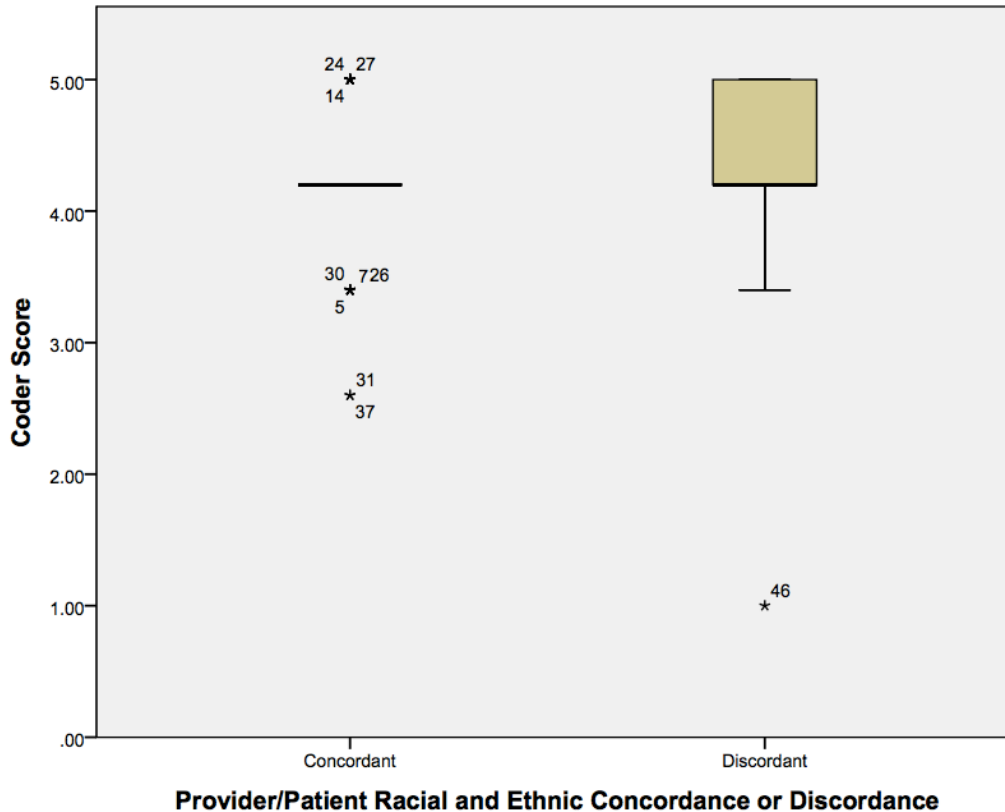
Table 2. Frequencies of Patient/Provider Matches in Racial/Ethnic Concordant or Discordant Groups		
	N	%
Concordant	51	55.4%
Discordant	41	44.6%
Total	92	100%

Inferential Statistics

Three one-way ANOVA's were conducted to test the three thesis aims. As a result, each one-way ANOVA will correspond to an aim.

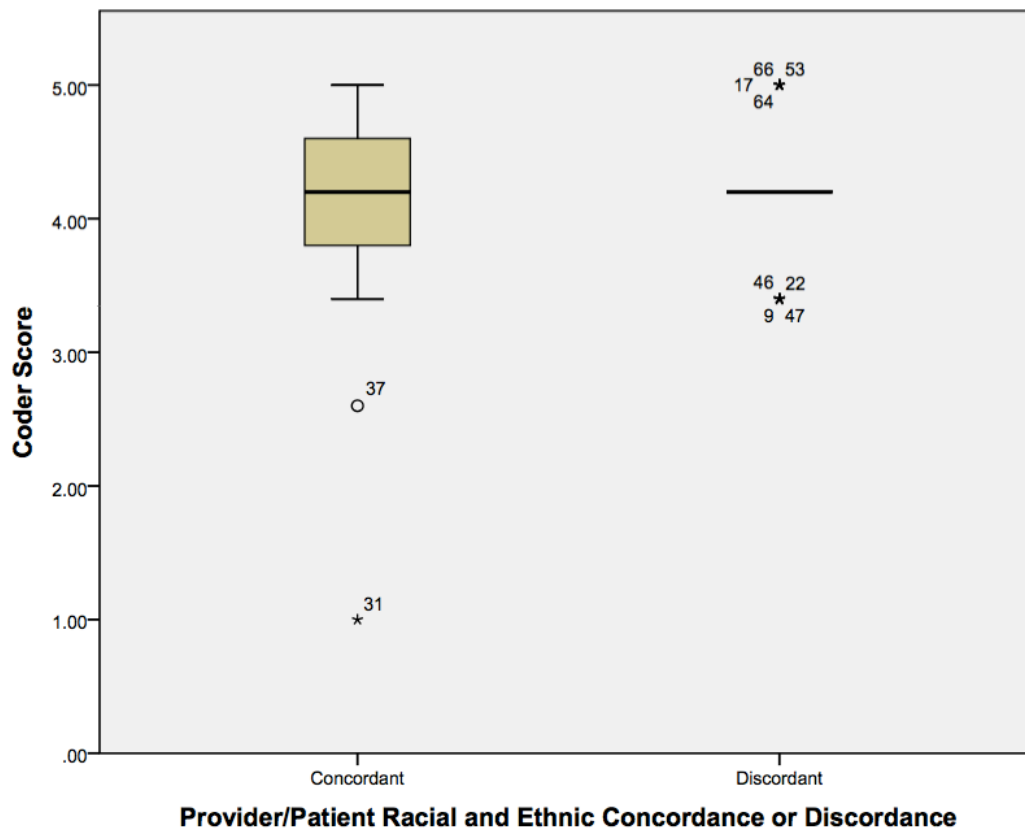
Aim 1. Figure 2 depicts this data for the two groups with two box plots. This boxplot shows that for the concordant group there was very little variation between patient and provider matches with regard to “identifying feelings”, with the only variation stemming from the nine outliers. Most outliers (6 scores) were located below the mean. A one-way ANOVA was conducted to analyze any differences between groups of patient-provider matches (racially/ethnically concordant or discordant) and their coder scores on item 16, “Identifies Feelings”. The one-way ANOVA suggested that there was no significant difference between groups in the coder scores for this item, $F(1,90) = .000$, $p = 1.000$. The Independent Samples Mann-Whitney U Test confirmed the null results $p = 0.752$.

Figure 3. Boxplots showing spread of coder score for Item 16 “identifies feelings” by racial and ethnic concordant or discordant group



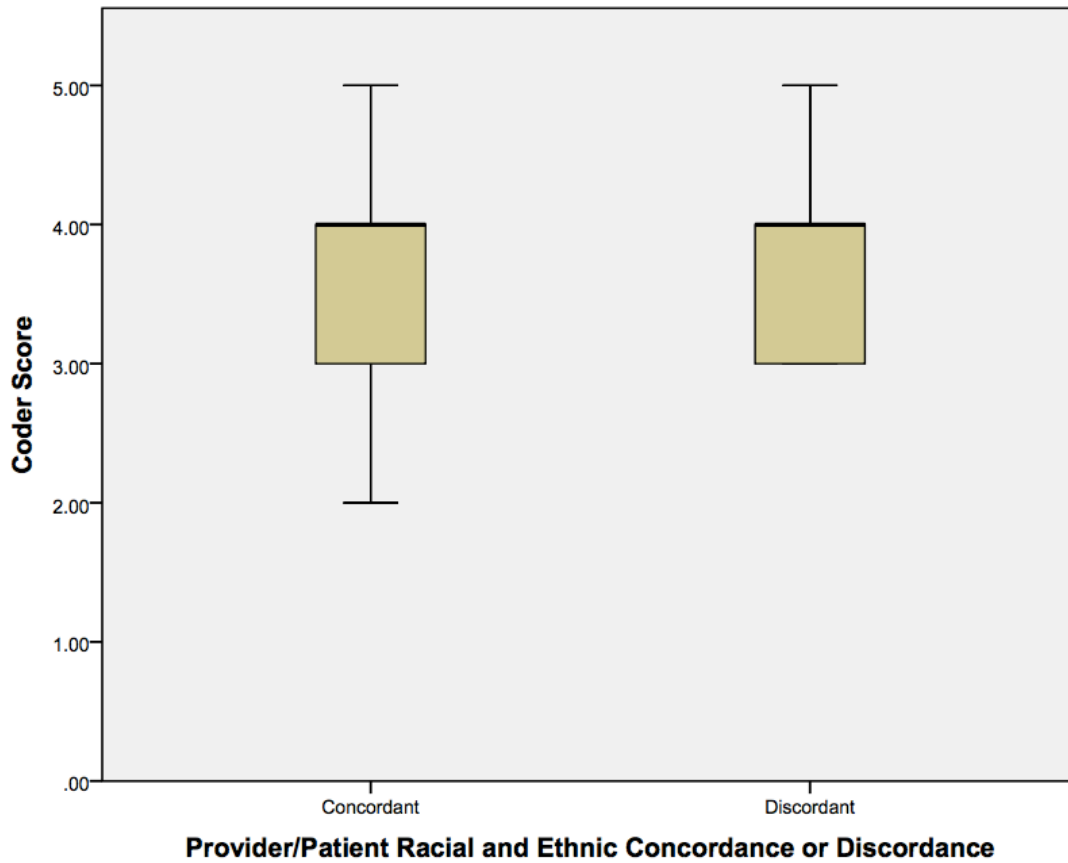
Aim 2. Another one-way ANOVA was conducted to analyze differences between groups of patient-provider matches (racially/ethnically concordant or discordant) and their coder scores on item 17, “Accepts Feelings”. The one-way ANOVA suggested that there were no significant differences between groups regarding the coder score for this item, $F(1, 90) = .102, p = .750$. Figure 3 depicts this data for the two groups with two boxplots. These boxplots suggest that the discordant group showed little variation from patient-provider matches regarding the behavior “accept feelings”, but it did demonstrate that there were 8 outliers in the group. While the concordant group showed more of a normal distribution with two outliers in the lower levels. The Independent Samples Mann-Whitney U Test confirmed the null results $p = .924$.

Figure 4. Boxplots showing spread of coder score for Item 17 “accepts feelings” by racial and ethnic concordant or discordant group



Aim 3. The final one-way ANOVA conducted, analyzed the differences between groups of patient-provider matches (racially/ethnically concordant or discordant) and their coder scores on item 18, “encourages emotional expression”. The one-way ANOVA suggested that there were no significant differences between the groups with regards to their coder score on this item, $F(1, 90) = .052, p = .820$. Figure 4 depicts this data for the two groups with two box plots. The boxplots for item 18, “encourages emotional expression”, show no outliers and indicate a distribution with some variation across scores. The Independent Samples Mann-Whitney U Test confirmed the null results $p = .692$.

Figure 5. Boxplots showing the mean and spread of coder score for Item 18 (encourages emotional expression) by racial and ethnic concordant or discordant



Discussion

This thesis was conducted in order to explore whether PCC differs by racial/ethnic concordance or discordance among patients and behavioral health providers. Domains of PCC examined were “identification of patient feelings” in clinical sessions, “accept their patients’ emotions” in clinical sessions, and “encourage emotional expression” in their patients.

The results outlined in the previous sections suggest that there was no relationship between racial/ethnic concordant or discordant groups and PCC in this sample of patients and behavioral health providers.

While this thesis was one of the first to look at behavioral health patients' and providers' racial/ethnic concordance and discordance and PCC, the results are consistent with studies examining racial/ethnic concordance which found no relationship between racial/ethnic concordance and various domains of PCC (Scheid & Smith, 2016; Adams et al., 2015; Schoenthaler et al., 2012). For instance, Scheid and Smith (2016) found that racial and ethnic concordance did not improve trust between patient and providers. Similarly, Schoenthaler et al. (2012) found that racial and ethnic concordance did not lead to improved medical adherence or communication among hypertensive Black patients. Adams et al. (2015) also found that racial and ethnic concordance was not a factor in determining if patients felt more comfortable talking about their mental illness to clinicians. However, they found that PCC was a more important factor in making patients feel more comfortable disclosing their diagnoses. While this thesis explored how racial and ethnic concordance is associated with PCC, this evidence suggests that PCC may actually not be tied to racial and ethnic concordance but PCC may be an important characteristic by itself as suggested in this thesis. While our study findings are consistent with this evidence, in general, the literature on the relationship between concordance and PCC is inconclusive and merits further investigation.

For example, numerous studies suggest that racial and ethnic concordance is related to better health outcomes and better communication (Earl et al., 2013; Traylor et al., 2010; Cooper et al., 2003). Cooper et al. (2003) found that racial and ethnic concordance

between Black patients and Black providers led to longer visits and happier patients which lead to the patients reporting a higher quality of care. Cooper et al. (2003) also suggests that PCC does not explain the longer visits and happier patients in concordant patient-provider relationships.

There are several possible reasons for our null finding. First, PCC was defined in this thesis using the operational definition from Epstein et al. (2005). The factor (EEC) chosen from the PCBH, which consists of the three items used as the dependent variables, only encompasses one aspect of the operational definition of PCC. While these three items were a proxy for PCC rather than PCC itself, using only one aspect of the operational definition provided by Epstein et al. (2005) may be limiting. Epstein et al. (2005) created this operational definition in order to improve measurement of PCC and create a standardized way to measure it throughout the literature. Epstein et al. (2005) even suggests that components of PCC are not necessarily correlated so therefore measuring this one aspect and deviating from the full definition may suggest that PCC may not have been measured at all. It may be important in future studies to measure all aspects of the PCC operational definition in order to get an accurate reading of PCC.

Second, our study also captured patient and provider races and ethnicity differently than many other studies. In fact, most studies compared only Black and White patients and providers while this thesis also examined ethnicity (Latinos) as well as people who identified as Asian (Cooper et al., 2003; Traylor et al., 2010; Earl et al., 2013). By identifying Latino patients and providers as well as Asian patients and provider, this thesis expanded previously used samples from other studies and encompassed two of the fastest growing minority populations in the United States (Pew

Research Center, 2011). As mentioned before Cooper et al. (2003) found that Black patients benefitted more from racially concordant care than White patients. Including more races and ethnicities in the sample provides more information on the nuances of how racial and ethnic concordance may affect different races and ethnicities.

While having more races and ethnicities in this sample created a more representative sample of the United States population, there are some limitations to this approach. This thesis included other races and ethnicities but did not distinguish or create a more nuanced label of which races were in the concordant group (i.e., White-White, Latino-Latino, Black-Black, Asian-Asian). Cooper et al. (2003) suggested that Black patients have the most to benefit from a racially concordant provider therefore by not creating a more nuanced label; this thesis could have missed important relationships between racial and ethnic concordance and PCC by specific racial and ethnic identity.

Third, many existing studies measured concordance and PCC among patients and their primary care providers. However, this study focused specifically on behavioral health providers. Given the nature of behavioral health providers and the importance placed on the therapeutic alliance to provide quality care, as well as the previously discussed connection between the therapeutic alliance and PCC, the null results of this study may be due to the fact that in general we observed high scores of PCC in both groups (Rogers, 1951; Horvath et al., 2011; Pinto et al., 2012; Castro et al., 2016). The ceiling effect shown in the boxplot in figure 4 may also be attributed to this.

During therapy, behavioral health providers have to engage in many of the behaviors measured in this study (identify feelings of patients, accept feelings of patients, and encouraging emotional expression of patients) in order to provide adequate care. By

using these items as a proxy of PCC, the data in this study suggests that most therapists regardless of racial and ethnic concordance do tend to score high on these indicators of PCC. Therefore, if this thesis could have measured other aspects of PCC not specific to what behavioral health providers are already trained in or if we included non-behavioral health providers, perhaps we would have observed greater variation in scores.

While we noted no differences in PCC among racially and ethnically concordant patient provider groups, it is critical to continue to examine racial and ethnic concordance as well as PCC, as it relates to patient outcomes given the inconsistency in the literature (Adams et al., 2015; Cooper et al., 2003). As mentioned previously, patient emotional wellbeing and health outcomes (i.e. headaches, hemoglobin levels, and pain) can be improved with PCC (Stewart, 1995; Jiang, 2017). Moreover, studies like Johnson, Roter, Powe, and Cooper (2004) provide evidence that PCC can improve relationships between patient and providers regardless of racial or ethnic identity. Therefore, perhaps it seems critical to promote PCC among all patient and providers rather. For instance, it is possible that if racial and ethnic concordance is not a possibility, PCC could still improve outcomes (Johnson et al., 2004).

Despite the non-significant findings, our results suggest a need to further explore PCC in behavioral health populations and examine the potential impact of racial and ethnic concordance on PCC. As the results of this study do not show any conclusive results there are no concrete implications for behavioral health providers and community health that can be deciphered from the data. However, given previous research suggesting the possibility of a relationship of racial and ethnic concordance as well as PCC to health

outcomes, and acknowledging the limitations of our design as described above, these explorations continue to be of importance.

Therefore, we recommend that concrete efforts to promote PCC should be added to the curriculum of behavioral health providers' trainings as increasing these behaviors could improve the therapeutic alliance (Rogers, 1952; Horvath et al., 2011; Pinto et al., 2012; Castro et al., 2016). With increased therapeutic alliance, improvements in mental health may be able to be seen across the board (Rogers, 1952; Horvath et al., 2011). These results could lead to greater implications in terms of community/public health, since mental health disorders are the leading causes of disability (National Institute of Mental Health, 2010). By improving mental health outcomes through increased trainings surrounding PCC, it is likely that this approach may be able to reduce the disability-adjusted life years (DALYs) attributed to mental health disorders.

There are several study limitations. First, participants were conveniently recruited into this study. Dr. Alegria and the original research team conducted recruitment of providers by presenting the purpose of the study and the plan to administer the provider DECIDE training to improve PCC. Then, providers volunteered to participate. This aspect of obtaining volunteers, after presenting the purpose may have skewed the results since providers were aware not only of what the study was supposed to accomplish but also they may have been the providers who were most interested in PCC in the first place. This fact may also limit the generalizability of the study to the other behavioral health professional as there may have been individual preferences that could have led to the higher levels of PCC for all providers in this study.

Second, PCBH was assessed objectively, through the use of trained coders, measuring patient provider interactions. It is possible that it may have been more appropriate to measure a patient's subjective experience of PCC. Gathering a patient's subjective experience can inform researchers and public health professionals on how to better improve their communication with patients and therefore improve health outcomes in their patient's (Epstein et al., 2005). Many other studies have utilized this strategy by measuring patients' perceptions of trust, quality of care, and satisfaction (Cooper et al., 2003; Traylor et al., 2010; Schoenthaler et al., 2012; Adams et al., 2015). Despite this potential limitation it is also important to acknowledge that subjective ratings from surveys can be biased (Epstein et al., 2005). For instance, patients' are not randomly distributed across providers; they usually leave if they do not like their providers and this could give us a dataset that is positively skewed. Additionally, subjective ratings from the survey provide a global assessment of interpersonal relationships but it does not reliably provide assessments of PCC components (Epstein et al., 2005). However, this coding system provides researchers with a less biased way to measure PCC components (Epstein et al., 2005). This method is also consistent with other studies which have used more objective measures of PCC (Epstein et al., 2005; Weiner et al., 2012). Given this, using a coding system may provide a more objective and accurate view of the nature of the relationship.

Additionally, the PCBH was a novel coding system that has not be tested by other studies. While it provides this thesis with the opportunity to test a novel coding system, it may also affect the validity of the measurement of PCC in this study. In fact, there is no certainty that PCC, or a proxy for PCC, was actually measured. This can then put into

question not only the validity of the PCBH but also the validity of the results of this study.

As always, sample size was a limitation to this study. With 92 patients and 66 providers, this thesis could not have captured a full range of races and ethnicities that encompass the population of the United States. In fact, because of the small sample size, participants had to be grouped into bigger categories of race and ethnicity and others were completely left out (i.e. Native Americans, Middle Eastern, and even nuanced identities within the Asian and Latino category). In a study, looking at how to reduce racial and ethnic inequities, it was important to attempt to capture every identity and particularly those who are most marginalized. With this small sample, those nuances and important aspects of identity are erased.

This study provides important preliminary evidence to further explore racial and ethnic concordance and its relationship to PCC in the behavioral health field. In future work, we might gather baseline levels of PCC in both primary care providers and behavioral health providers. This would help identify any differences in how and if PCC is generally delivered, between primary care providers and behavioral health providers. By doing so, it may not only provide helpful information for how characteristics of PCC differ between different providers but may also provide evidence for the development of PCC definitions specific to specialty.

After researching this baseline level of PCC for behavioral health care providers compared to primary care providers' PCC scores, future research should be extensive and address some of the limitations of this study including gathering a larger and more racially and ethnically diverse sample when exploring the effects of racial and ethnic

concordance on PCC or any other health related outcome or characteristic. With a racially and ethnically diverse and large sample it would be easier to make conclusions based of specific identities, which could help improve care for people of color as well as for White people.

Additionally, future research should include an operational definition of PCC that encompasses all aspects of the characteristic specifically for behavioral health care, not just limited to EEC. Using Epstein et al. (2005) as an operational definition could be sufficient, if modified to encompass behavioral health care characteristics and as long as all aspects of the definition are measured.

Furthermore, studies should be sure to keep patient and providers unaware of the actual research question so as to avoid any bias responses. Researchers should also use a validated coding system to measure PCC like the Roter Interaction Analysis System (RIAS) (Weiner et al., 2012). Through the use of a validated coding system, researchers can be sure they are measuring PCC as accurately as possible.

While these future directions are focusing on improving research related to racial and ethnic concordance and PCC, researchers should also explore these topics individually. If possible, a longitudinal study should be conducted to explore how racial and ethnic concordance may contribute to health outcomes (in positive or negative ways). By exploring the effects of racial and ethnic concordance through a long period of time, it may provide researchers with a greater understanding of the mechanisms through which it works. It would also be interesting if racial and ethnic concordant patients and providers were compared with discordant patients and providers over time to explore how health outcomes differ.

This thesis set out to explore a possible relationship between racial and ethnic concordance and PCC in order to provide a potential method of reducing racial and ethnic disparities in health. This study was one of the first studies to explore this topic of racial concordance and PCC in the behavioral health field. The results of this study indicated that is no relationship between racial and ethnic concordance and PCC. However, with the various limitations in this study may not be comparable to those of existing studies.

Regardless, the overlap in the ability of these characteristics to increase perceived similarity and improved trust remains important to the therapeutic alliance and therefore function of behavioral health care. Given their importance, both characteristics should continue to remain under consideration when it comes to improving quality of care particularly for people of color. With further research surrounding these topics, there is hope that racial and ethnic disparities in health care can be reduced.

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Appendices

Appendix A

Questions in Provider Baseline Assessment (RA-1) regarding racial and ethnic background.

3. Are you of Latino or Hispanic descent, that is, Mexican, Mexican American, Chicano, Puerto Rican, Cuban or Spanish?

1. Not Latino/Hispanic
2. Puerto Rican
3. Dominican
4. Cuban
5. Mexican
6. Mexican American
7. Chicano
8. Central American
9. South American
10. Brazilian
11. Other Spanish (specify) _____
12. Don't know
13. Refused

4. Please circle which group best describes your race (circle all that apply)?

1. White/ Caucasian
2. African/ African American/ black
3. American Indian
4. Alaska native
5. Asian Indian
6. Chinese
7. Filipino
8. Japanese
9. Korean
10. Vietnamese
11. Other Asian (specify) _____
12. Native Hawaiian
13. Pacific islander
14. Guamanian or Chamorro
15. Samoan
16. Mestizo
17. Criollo

- 18. Mulato
- 19. Latin black
- 20. Caribbean
- 21. Other (specify) _____
- 22. Don't know
- 23. Refused

Appendix B

Questions in Patient Screener regarding racial and ethnic background

<p>Are you of Latino or Hispanic descent, that is, Puerto Rican, Dominican, Cuban, Mexican, Mexican American, Chicano, Central American, South American, or from any other Latino culture or ethnic origin?</p> <p>INTERVIEW: IF NECESSARY ASK Which?</p>	<p style="text-align: center;">Check All That Apply</p> <ul style="list-style-type: none"> <input type="checkbox"/> NOT LATINO/HISPANIC <input type="checkbox"/> PUERTO RICAN <input type="checkbox"/> DOMINICAN <input type="checkbox"/> CUBAN <input type="checkbox"/> BRAZILIAN <input type="checkbox"/> MEXICAN <input type="checkbox"/> MEXICAN AMERICAN <input type="checkbox"/> CHICANO <input type="checkbox"/> CENTRAL AMERICAN <input type="checkbox"/> SOUTH AMERICAN <input type="checkbox"/> OTHER (Equatorial Guinea, etc...) _____ <input type="checkbox"/> Refused <input type="checkbox"/> Don't know
<p>Which do you feel best describes your race?</p> <p>INTERVIEW: IF NECESSARY ASK Which?</p>	<p style="text-align: center;">Check All That Apply</p> <ul style="list-style-type: none"> <input type="checkbox"/> WHITE/CAUCASIAN <input type="checkbox"/> BLACK/AFRICAN/AFRICAN AMERICAN <input type="checkbox"/> AMERICAN INDIAN <input type="checkbox"/> ALASKA NATIVE <input type="checkbox"/> ASIAN INDIAN <input type="checkbox"/> CHINESE <input type="checkbox"/> FILIPINO <input type="checkbox"/> JAPANESE <input type="checkbox"/> KOREAN <input type="checkbox"/> OTHER ASIAN (SPECIFY) _____

	<input type="checkbox"/> NATIVE HAWAIIAN <input type="checkbox"/> PACIFIC ISLANDER <input type="checkbox"/> GUAMANIAN OR CHAMORRO <input type="checkbox"/> SAMOAN <input type="checkbox"/> MESTIZO <input type="checkbox"/> CRIOLLO <input type="checkbox"/> MULATO <input type="checkbox"/> LATIN BLACK <input type="checkbox"/> CARIBBEAN <input type="checkbox"/> OTHER (SPECIFY) _____ <input type="checkbox"/> Don't know <input type="checkbox"/> Refused
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Appendix C
Tufts Institutional Review Board Exclusion Letter



OFFICE OF THE VICE PROVOST FOR RESEARCH

Social, Behavioral, and Educational Research
Institutional Review Board
FWA00002063

Title: Secondary Data Analysis from DECIDE-PA and DECIDE PC

August 5, 2016 | Notice of Action

IRB Study # 1608014 | Status: EXCLUDED

PI: Christin Mujica
Faculty Advisor: Shalini Tendulkar
Reviewed: 8/5/2016

Thank you for providing an explanation of your secondary data analysis study using data collected through the P-CORI funded study. Because you do not have access to any identifying data or protected health information, Tufts University is not engaged in this research. Therefore, the above referenced study does not meet the definition of research under the Code of Federal Regulations Title 45 Part 46.102(f) and is not subject to review by the Tufts SBER Institutional Review Board.

Please note that this exclusion only covers the secondary analysis of deidentified data. Any future research activities as outlined in your email dated July 27, 2016 (including but not limited to surveys, interviews, or focus groups) should be approved by the Tufts SBER Institutional Review Board before any research activities begin.

IRB Administrative Representative Initials: